Municipal Setting Designations

MSDs: Another tool for Houston

Jedediah Greenfield
Program Manager

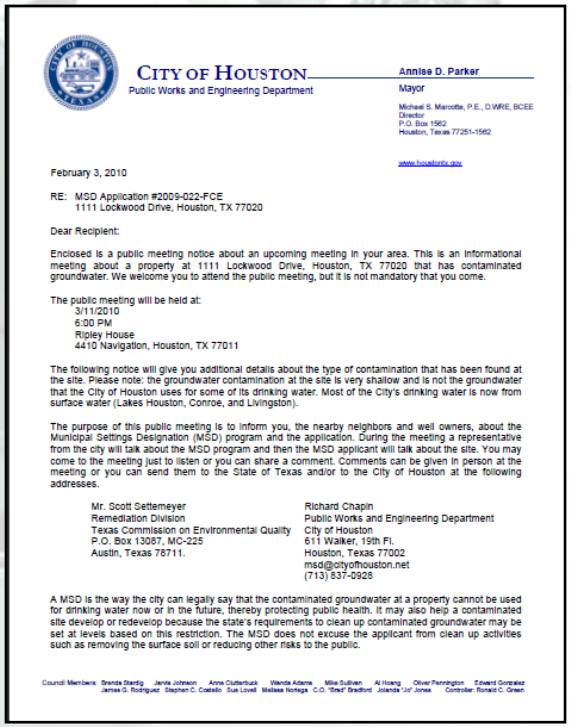
Agenda

- City of Houston - Programmatic
  - What an MSD is
  - Who the MSD impacts
  - Steps in the MSD process
  - **Questions / Comments**
- MSD Applicant - Technical
  - Specific information on the site
    8945 Manchester Street
  - **Questions / Comments**

Why Are We Here

- Inform you about an MSD application
  - Texas Port Recycling
- Explain what an MSD is and what it does for the applicant, the local community, and the City
  - Protection of Public Health
- Receive public comments

MSD Notice Letters



CITY OF HOUSTON
Public Works and Engineering Department

Annise D. Parker
Mayor

Michael S. Marcotte, P.E., D.WRE, BCEE
Director
P.O. Box 1562
Houston, Texas 77251-1562

www.houstontx.gov

February 3, 2010

RE: MSD Application #2009-022-FCE
1111 Lockwood Drive, Houston, TX 77020

Dear Recipient:

Enclosed is a public meeting notice about an upcoming meeting in your area. This is an informational meeting about a property at 1111 Lockwood Drive, Houston, TX 77020 that has contaminated groundwater. We welcome you to attend the public meeting, but it is not mandatory that you come.

The public meeting will be held at:
3/11/2010
6:00 PM
Ripley House
4410 Navigation, Houston, TX 77011

The following notice will give you additional details about the type of contamination that has been found at the site. Please note: the groundwater contamination at the site is very shallow and is not the groundwater that the City of Houston uses for some of its drinking water. Most of the City's drinking water is now from surface water (Lakes Houston, Conroe, and Livingston).

The purpose of this public meeting is to inform you, the nearby neighbors and well owners, about the Municipal Settings Designation (MSD) program and the application. During the meeting a representative from the city will talk about the MSD program and then the MSD applicant will talk about the site. You may come to the meeting just to listen or you can share a comment. Comments can be given in person at the meeting or you can send them to the State of Texas and/or to the City of Houston at the following addresses.

Mr. Scott Settemeyer
Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC-225
Austin, Texas 78711.

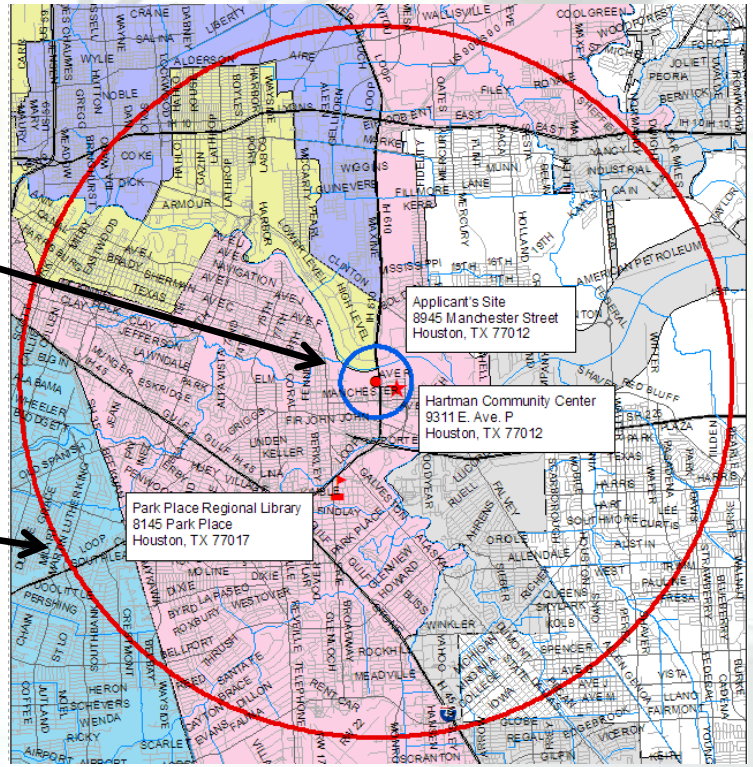
Richard Chapin
Public Works and Engineering Department
City of Houston
611 Walker, 19th Fl.
Houston, Texas 77002
msd@cityofhouston.net
(713) 837-0928

A MSD is the way the city can legally say that the contaminated groundwater at a property cannot be used for drinking water now or in the future, thereby protecting public health. It may also help a contaminated site develop or redevelop because the state's requirements to clean up contaminated groundwater may be set at levels based on this restriction. The MSD does not excuse the applicant from clean up activities such as removing the surface soil or reducing other risks to the public.

Council Members: Brenda Stardig, Jarvis Johnson, Anne Clutterbuck, Wanda Adams, Mike Sullivan, Al Hoang, Oliver Pennington, Edward Gonzalez, James G. Rodriguez, Stephen C. Costello, Sue Lovell, Melissa Noriega, C.O. "Brad" Bradford, Jolanda "Jo" Jones, Controller: Ronald C. Green

Property Owners
First-Class Mail
½-Mile Radius
City Requirement

Water Well Owners
Certified Mail
5-Mile Radius
State Requirement



If you received a notice through certified mail that means you have a water well according to the State's records

Water Well Information

- The State of Texas maintains the database for water well information
  - Texas Water Development Board
    - **(512) 463-7847**
- State Law requires notices to water well owners within 5-miles of the site
- The City cannot remove or correct information regarding water wells

Who the MSD Impacts

- Property Owners on the MSD Application
  - Unless you are the applicant:
    - An MSD **DOES NOT AFFECT** your property
    - An MSD ***DOES NOT AFFECT*** your water well
    - There are ***NO REQUIREMENTS*** on you
- Drinking water supplied by the City is not affected

What an MSD is

- **Voluntary** deed restriction to prevent the use of contaminated groundwater
- An MSD is the way a property owner can **legally** say that the contaminated groundwater at the property cannot be used now or in the future
- Another tool to address groundwater contamination

City Water Supply

- Houston's drinking water comes from either deep aquifers (20%) or surface water (80%)
  - Surface water supply
    - Lake Houston
    - Lake Conroe
    - Lake Livingston

Environmental Protection in Texas

- The State of Texas has jurisdiction for environmental protection
  - Texas Commission on Environmental Quality (TCEQ)

- Environmental Complaints

  - By Phone: 1-888-777-3186
  - Online: http://www5.tceq.texas.gov/oce/complaints/

  - By Phone: 311
  - Online: http://webintake.houstontx.gov/web_intake/Controller

MSD Program

- State Program Created in 2003
  - Texas Commission on Environment Quality (TCEQ)

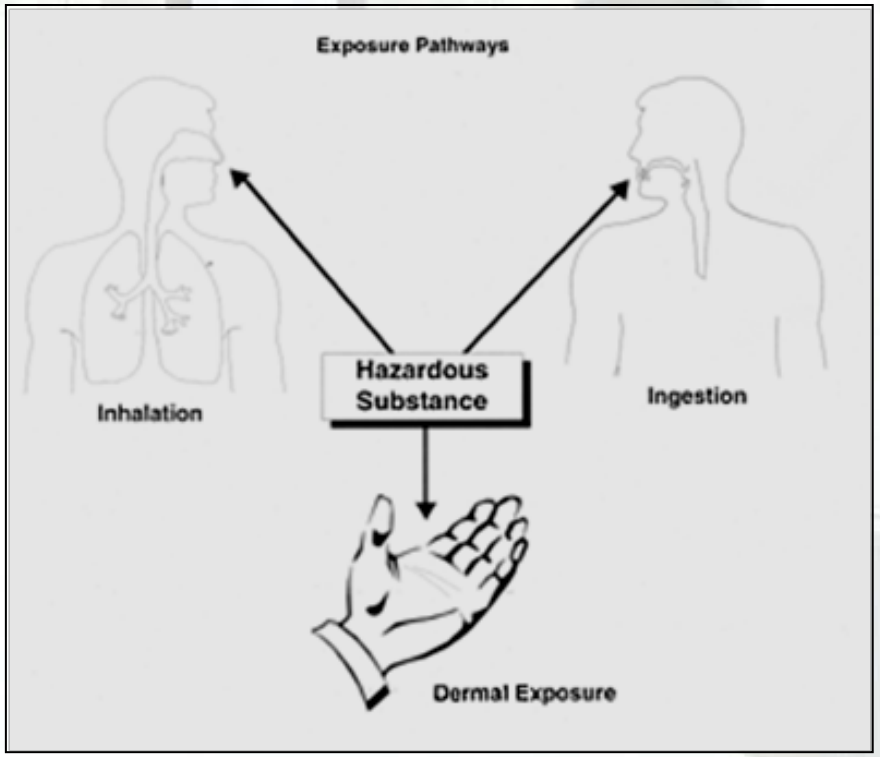
- City Program Created in 2007
  - Public Works & Engineering

Environmental Cleanup

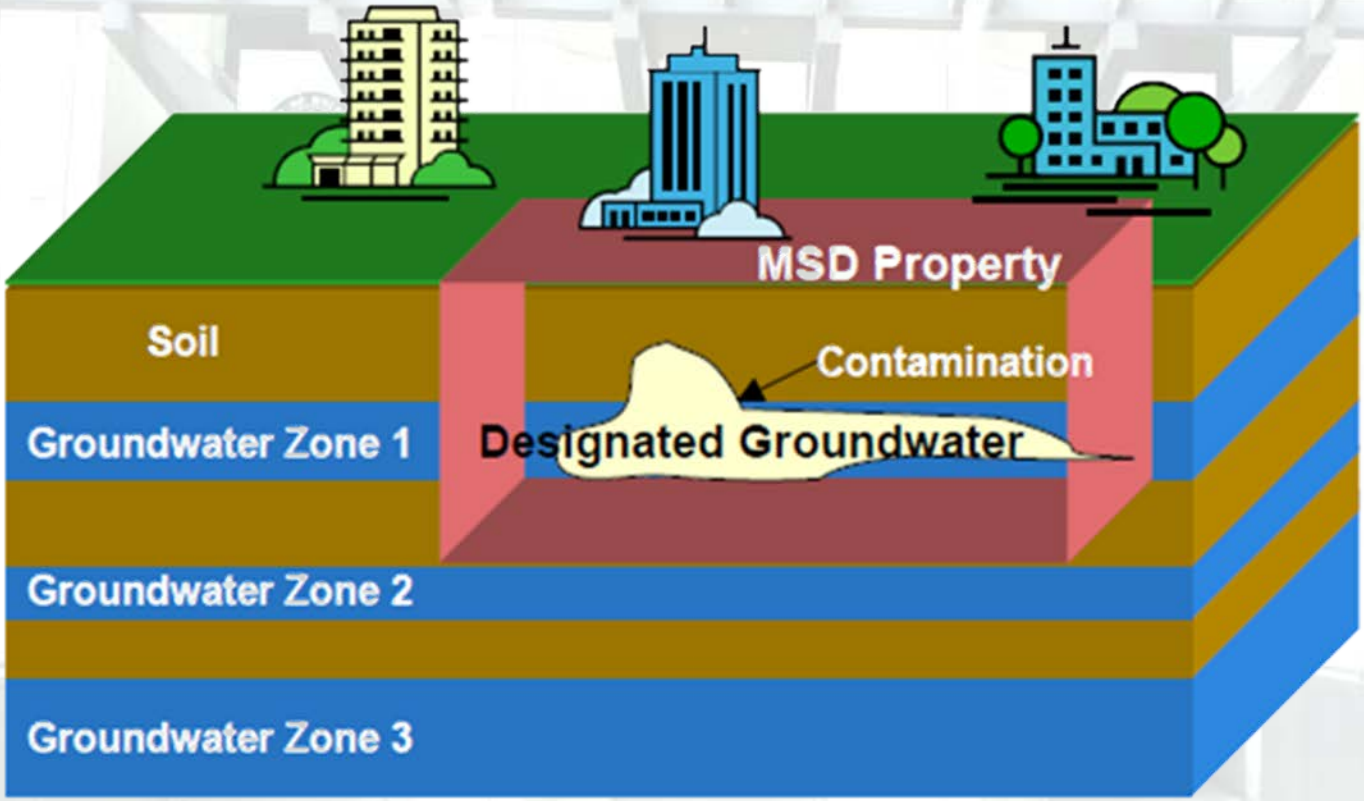
- The MSD is only **one step** in the cleanup process
- An MSD does ***NOT*** excuse the applicant from reducing risks to the public
- Responsible Parties are always responsible

Exposure Pathways

- Cleanup Programs are based on public exposure to contaminants and reducing public health risks
- Exposure Pathways
  - ~~Ingestion~~
  - Inhalation
  - Contact (dermal)
  - Soil
  - Groundwater to surface water
  - Ecological



Shallow Contamination

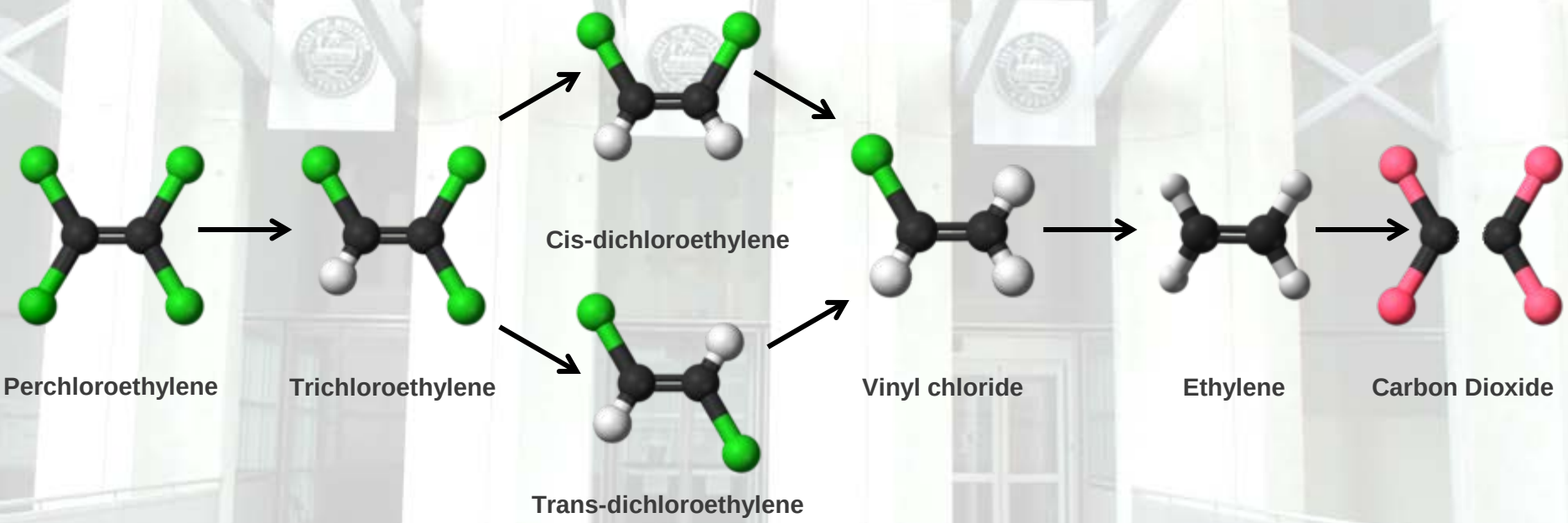


Impacted groundwater is typically between 20 and 60 feet below the surface.

Drinking Water Supply Wells typically get water from 600 feet or deeper below the surface.

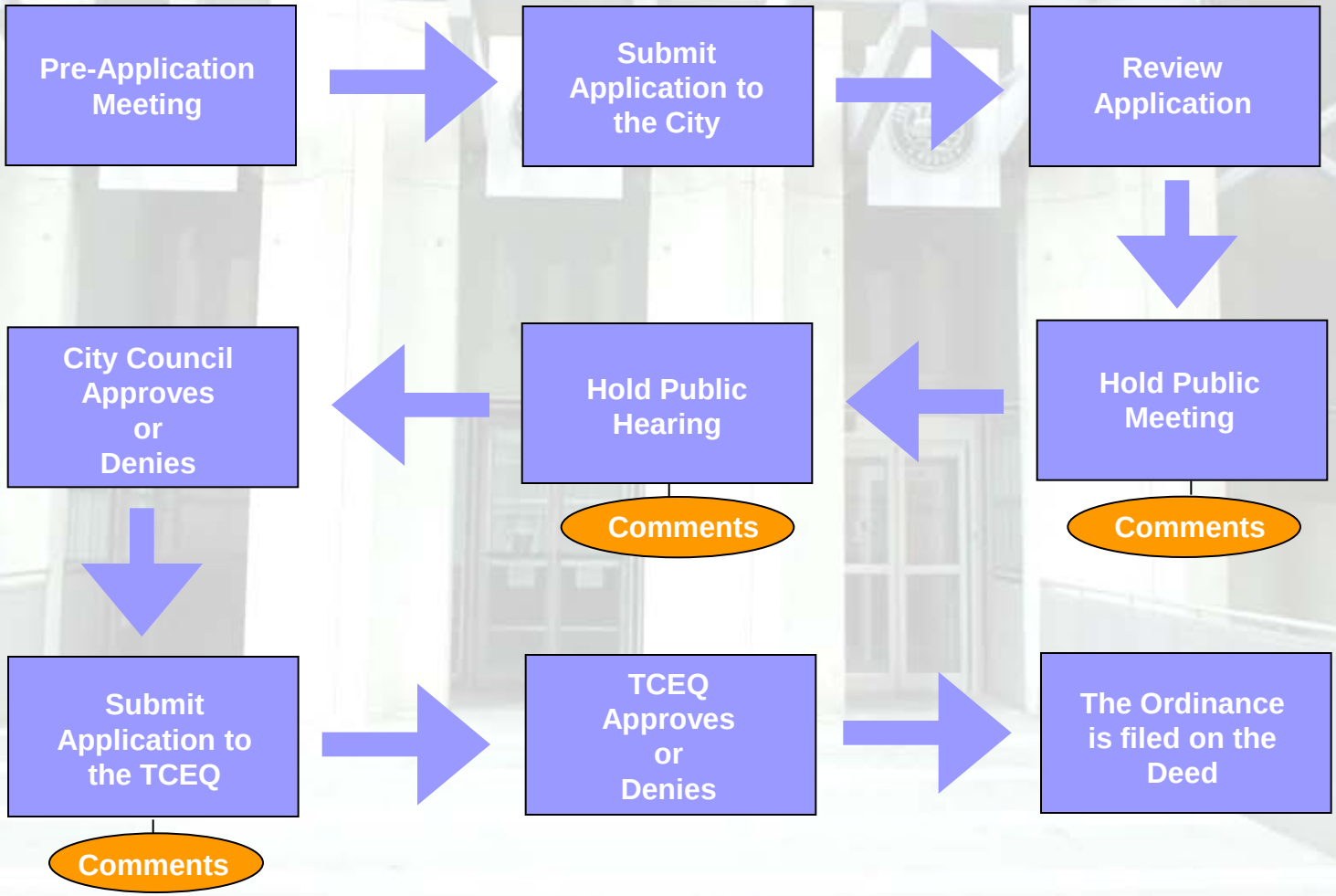
- *Please Note: Houston has shallow contaminated groundwater scattered across the City*

Natural Attenuation



This process takes decades, but is found to be the most efficient strategy.

Steps in the Process



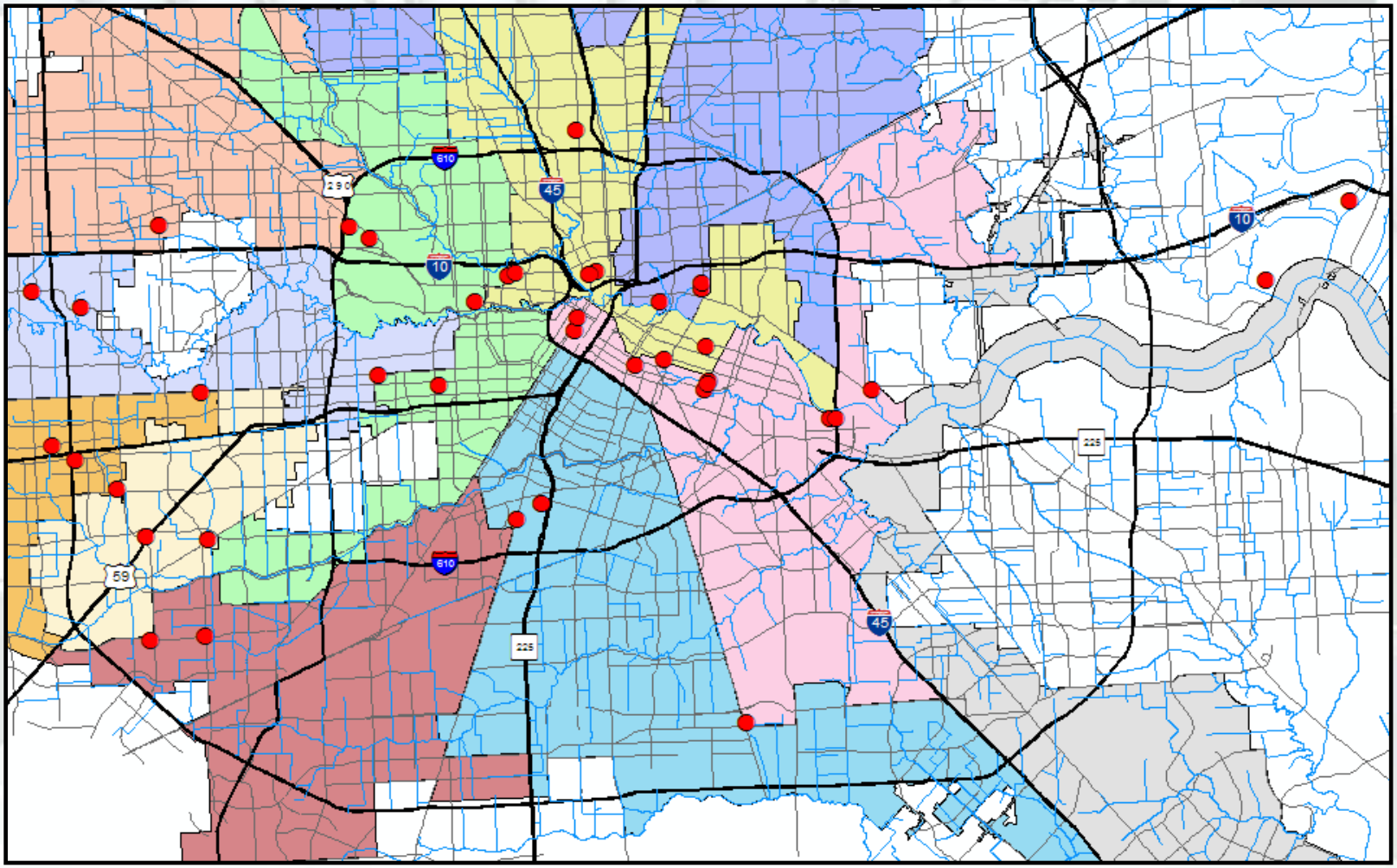
City's Requirements of the Applicant

- Enrollment in a State or Federal cleanup program
- Thorough investigation
  - Data must show that the groundwater plume is stable or decreasing, and delineated.
- A **third party** Engineer (P.E.)or Geologist (P.G.) must certify application

Why Support An MSD?

- Protects the public from consumption of contaminated groundwater
- Encourages clean-up of contaminated sites
- Promotes redevelopment of under-utilized properties

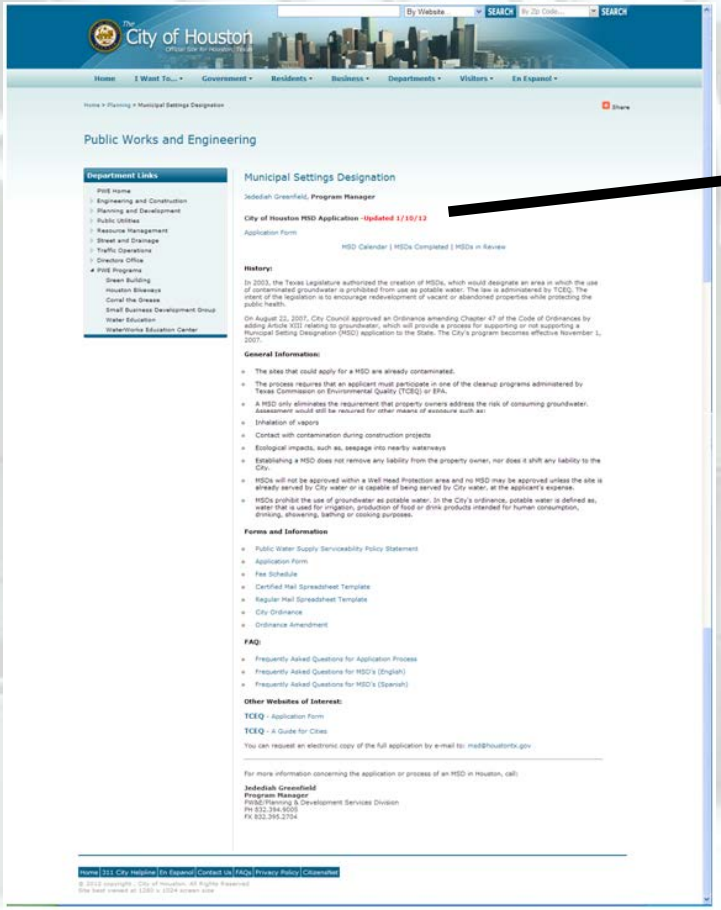
MSD Sites in Houston



MSD Application

- Flores Library reference desk
- 110 North Milby Houston, TX 77003

The MSD Website



Municipal Settings Designation

Jedediah Greenfield, **Program Manager**

City of Houston MSD Application -Updated 1/10/12

Application Form

MSD Calendar | MSDs Completed | MSDs in Review

www.houstonmsd.org

The MSD Website

MSD in Review

Carol Ellinger Haddock , **Assistant Director, P.E.**

MSD in Review

Differential Development – 1994, Ltd. #2008-012-DD (Lantern Lane Shopping Center Site)
Executive Summary
Full Application
Hoerbiger Corp. of America Inc. and Morgan Advanced Materials and Tech. Inc. # 2009-016-Milby (Milby Street Site)
Executive Summary
Full Application
Estate of Isadore and Esther Robinson # 2009-020-GMI (Former Gulf Metals Industries Landfill Site)
Executive Summary
Full Application
Public Meeting Notice
Public Metting Presentation
Silver Bishop Holdings, LP #2010-025-NOR (Navigation-Norwood Site)
Executive Summary
Full Application
Public Meeting Notice
Public Meeting Presentation

MSD Calendar

Carol Ellinger Haddock , **Asistant Director. P.E.**

Municipal Settings Designations Calendar

Information on the latest meetings, conferences, and events.

Date	Time	Event
07/14/2010	9:00 AM	Public Hearing: FPA/PinPoint Mykawa, LLC. (MSD # 2009-020-GMI) City Hall Council Chambers, 2nd Floor, 901 Bagby, Houston, TX 77002
07/20/2010	6:00 PM	Public Meeting: Schlumberger Technology Corporation (MSD #2010-027-STC) Judson Robinson Jr. Community Center, 2020 Hermann Dr., Houston, TX 77004
08/03/2010	6:00 PM	Public Meeting: Differential Development - 1994, Ltd. (MSD #2008-012-DD) Tracey Gee Community Center, 3599 Westchase Dr., Houston, TX 77042
08/04/2010	9:00 AM	Public Hearing: BAE Systems Resolutions Corporation, Inc. (MSD #2010-026-FSS) City Hall Council Chambers, 2nd Floor, 901 Bagby, Houston, TX 77002
08/24/2010	6:00 PM	Public Meeting: Board of Regents of the University of Texas System (MSD #2010-028-ACD) Judson Robinson Jr. Community Center, 2020 Hermann Dr., Houston, TX 77004

Public Hearing

- Date: April 10, 2012
- Time: 10:00 AM
- Place: City Council Chamber (Committee Meeting)
  Transportation, Technology, & Infrastructure
- Address: 901 Bagby, Second Floor
  Houston, Texas 77002

Any person wishing to speak on this issue must arrive at least 15 min early and sign the speakers list located on the front desk.

Contact Information

Jedediah Greenfield
Program Manager

Public Works & Engineering
City of Houston,
1002 Washington, 2nd Floor
Houston, Texas 77002

msd@houstontx.gov
(832) 394-9005

Texas Port Recycling
8945 Manchester Street

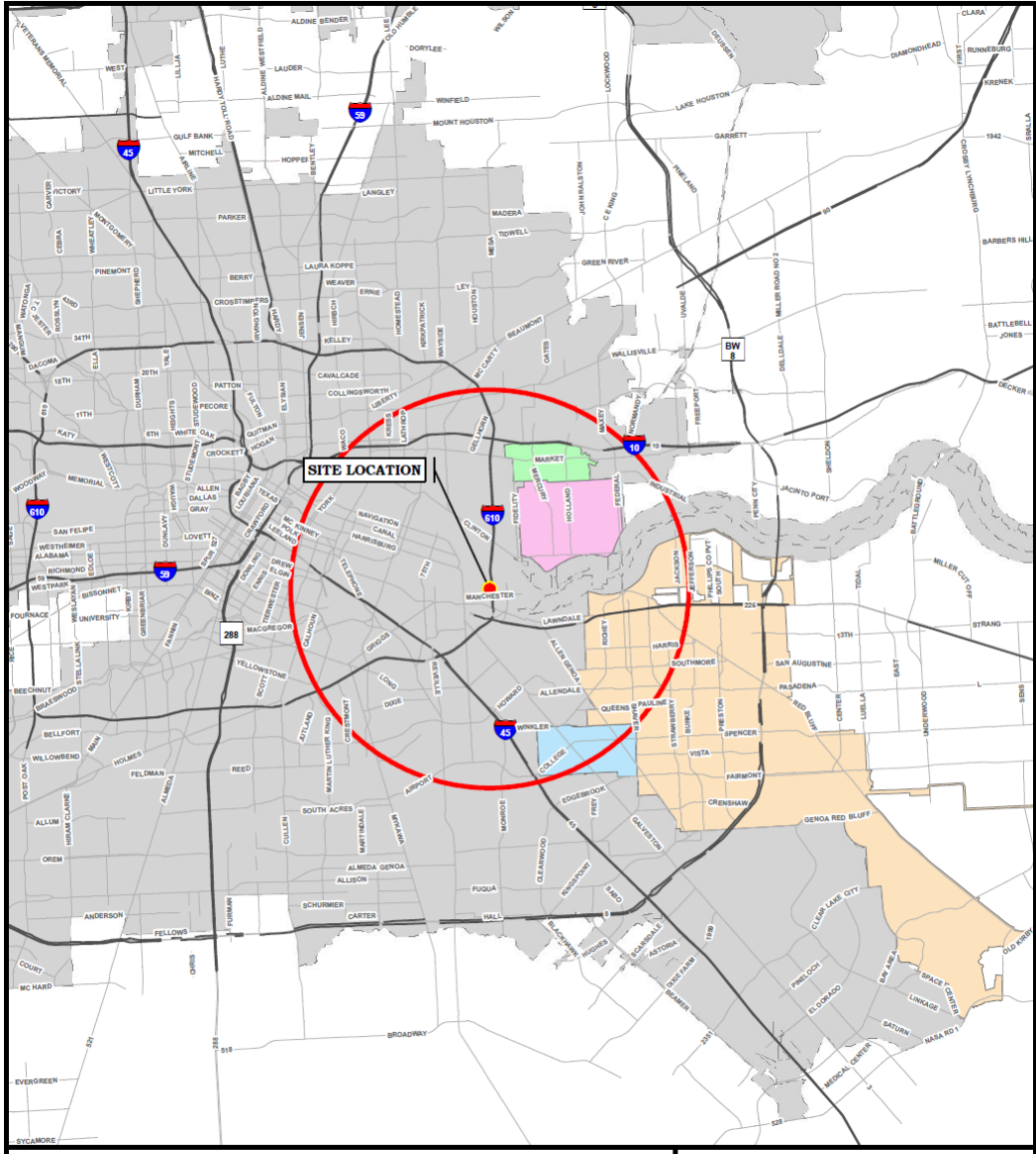
- Mark Joyner
  - Texas Port Recycling
    General Manager

- Marissa Pihl
  - Weston Project Leader
- John Mastroianni, PG
  - Weston Project Manager
- 713-985-6600

Texas Port Recycling

- Location: 8945 Manchester Street, Houston, Texas (Site)
- 23 Acre Industrial site
- Metals Recycling Facility
- Entered Voluntary Cleanup Program (TCEQ No. 1906) in 2007
- Adjacent to Interstate 610 East Loop Freeway, and close to Texas State Highway 225 and the petrochemical corridor
- The site is bordered by the Houston Ship Channel (HSC) to the North, Interstate 610 to the East, commercial businesses to the South, and a former refinery and cement plant to the West.

Site Location Map

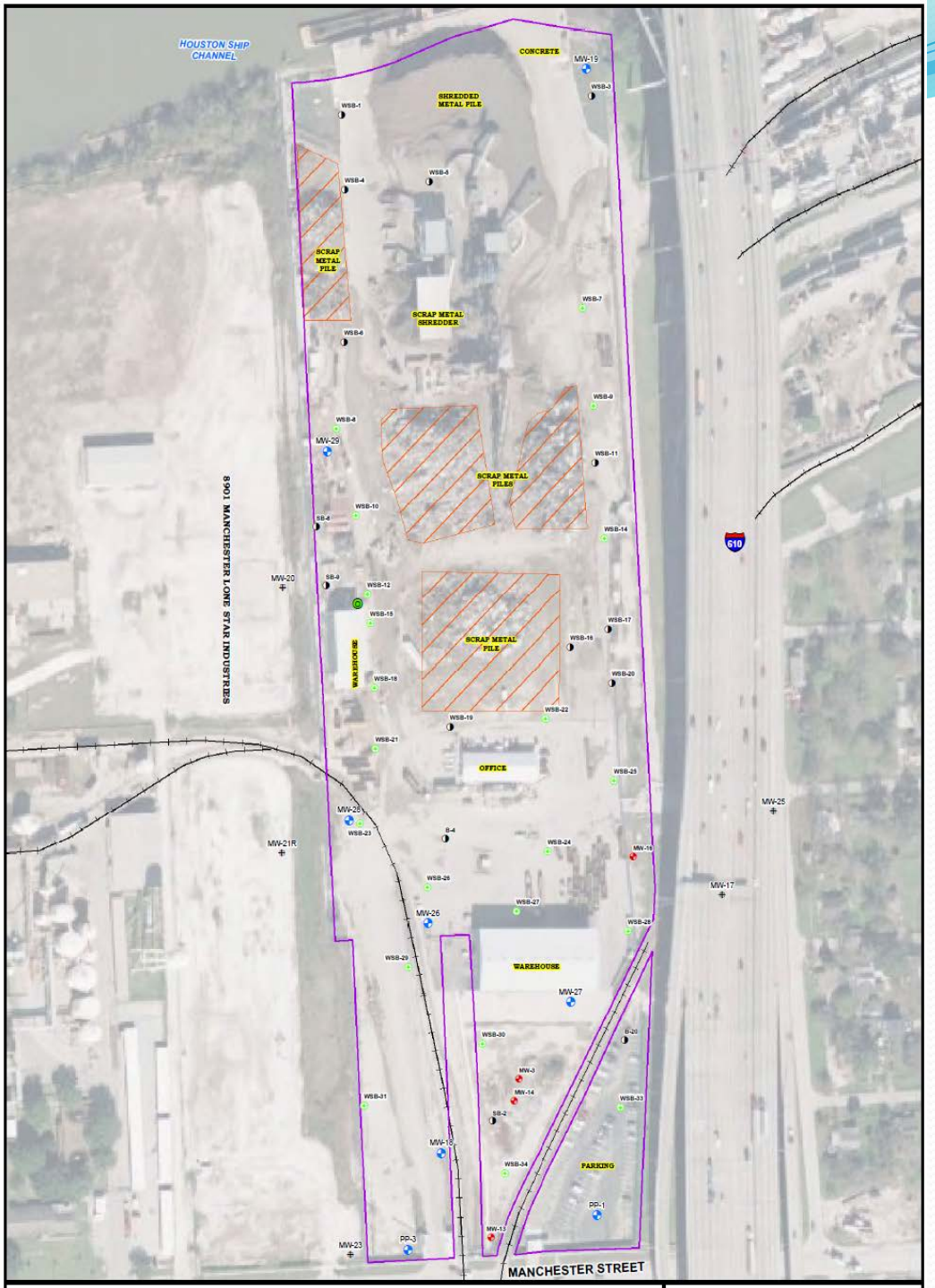


WESTON SOLUTIONS

FIGURE 1
SITE LOCATION MAP
MUNICIPAL SETTING DESIGNATION
THE DAVID J. JOSEPH COMPANY
TEXAS PORT RECYCLING
8945 MANCHESTER STREET
HOUSTON, HARRIS COUNTY, TEXAS

DATE	PROJECT NO	SCALE
MAR. 2011	05336.108.001.0090	AS SHOWN

Site Map


HOUSTON SHIP CHANNEL
CONCRETE
SHREDDED METAL PILE
SCRAP METAL PILE
SCRAP METAL SHREDDER
SCRAP METAL PILES
SCRAP METAL PILE
8901 MANCHESTER LONE STAR INDUSTRIES
SEDIMENTATION
OFFICE
WAREHOUSE
PARKING
610
MANCHESTER STREET
MW-19
MW-29
MW-20
MW-21R
MW-28
MW-26
MW-27
MW-18
MW-23
MW-25
MW-17
MW-16
MW-3
MW-14
MW-13
PP-1
PP-3
SB-2
WSB-1
WSB-2
WSB-3
WSB-4
WSB-5
WSB-6
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WSB-30
WSB-31
WSB-33
WSB-34

Site Conditions

- Groundwater onsite has been impacted by:
  - Benzene, Ethylbenzene and Xylenes
  - Methylene chloride
  - Benzo(a)pyrene
  - Lead
  - Total Petroleum Hydrocarbons (TPH)
- No impacts to surface water found that exceed regulatory standards.

Site Conditions (cont.)

- Soil onsite has been impacted by:
  - Benzene, Toluene, Ethylbenzene and Xylenes
  - Methylene Chloride
  - Arsenic
  - 1-Methylnaphthalene and 2-Methylnaphthalene
  - Benzo(a) pyrene
  - TPH
- The majority of the facility consists of buildings and asphalt or concrete paved areas.
- The only non-ingestion Surface Soil Exceedance, TPH, is located under the asphalt paved facility entrance.

Site History

- Site developed in 1913
- Operated as a Cement Manufacturing Facility
- Demolished in the 1990s
- Vacant until 2004, when purchased by Texas Port Recycling.
- Adjacent property at 8901 Manchester Street was an oil refinery from 1918 to 1968.

Texas Port Recycling Environmental Responsibility

- Use of Best Management Practices and implementation of Texas Port Recycling internal environmental standards.
- The majority of contamination is from off-site. Sources of contamination are no longer present.
- Stormwater Pollution Prevention Plan in place (TXR05W204).
- Surface water runoff is controlled by stormwater structures.
- Stormwater runoff is sampled and analyzed frequently to detect any releases to the Houston Ship Channel.
- The majority of the site is covered with impermeable materials or buildings.

Historic Investigations

- Phase I and Phase II Environmental Site Assessments (1993, 1997, 1998, 2004, 2005).
- Affected Property Assessment Report (APAR) (June 2006).
- The site has been enrolled in the VCP program under No. 1906 since 2007.
- Supplemental Environmental Site Assessments (2006, 2008, 2010)
- APAR Addendum(September 2009)
- Assessments have included the installation of 30 monitoring wells, 12 temporary monitoring wells, 66 soil borings, and 7 test pits.

Soils

- With the MSD, only TPH in soil exceeds the regulatory level for commercial/industrial sites.
- The TPH exceedance is located beneath the paved entrance to the facility.
- The majority of the site (approximately 85%)is covered with paved surfaces and structures

Vapors

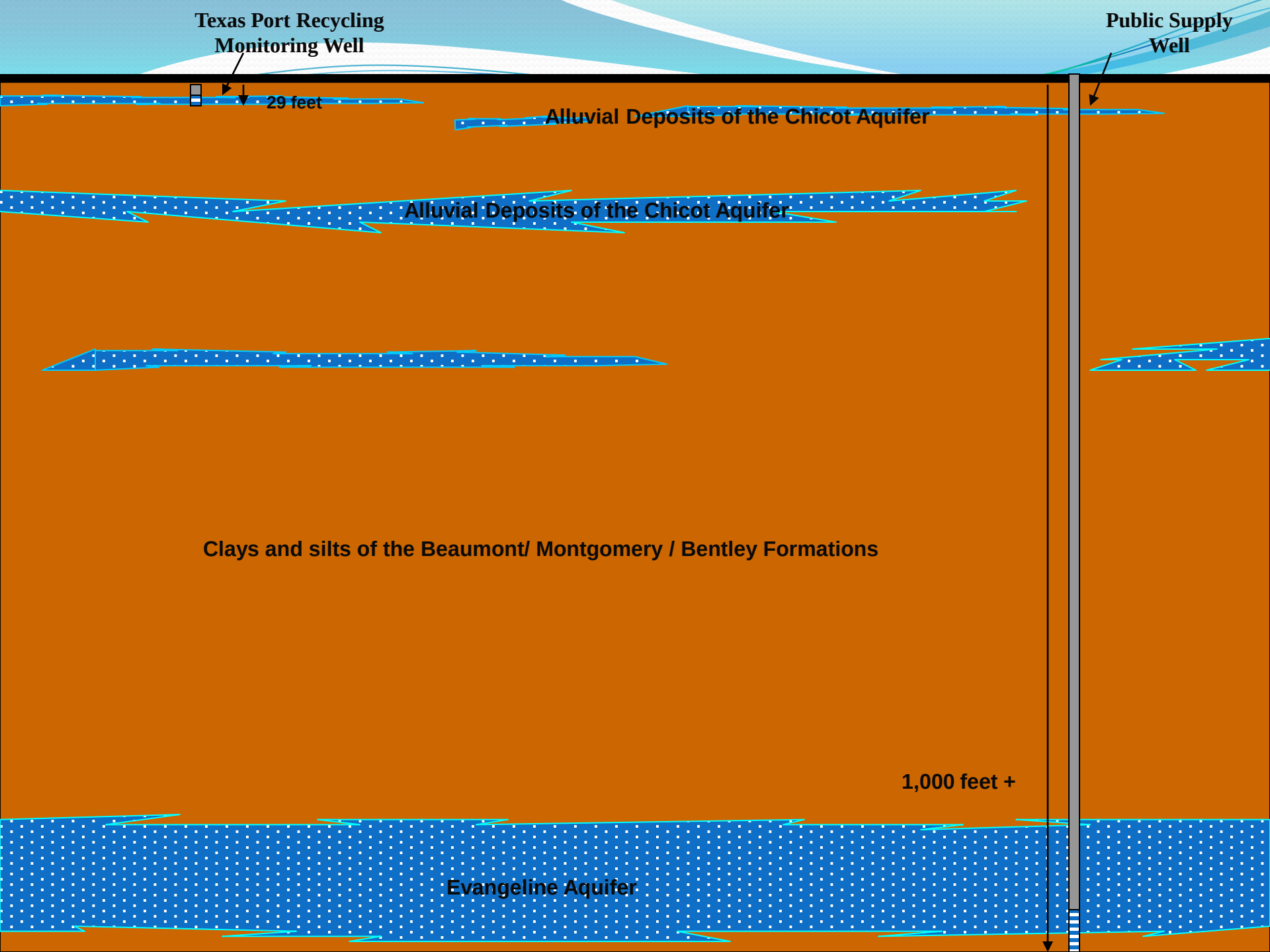
- Soils have been extensively investigated to depths of up to 35 feet below ground surface.
- Only TPH exceeds the regulatory level for inhalation.
- The TPH exceedance is located beneath the paved entrance to the facility.

Groundwater

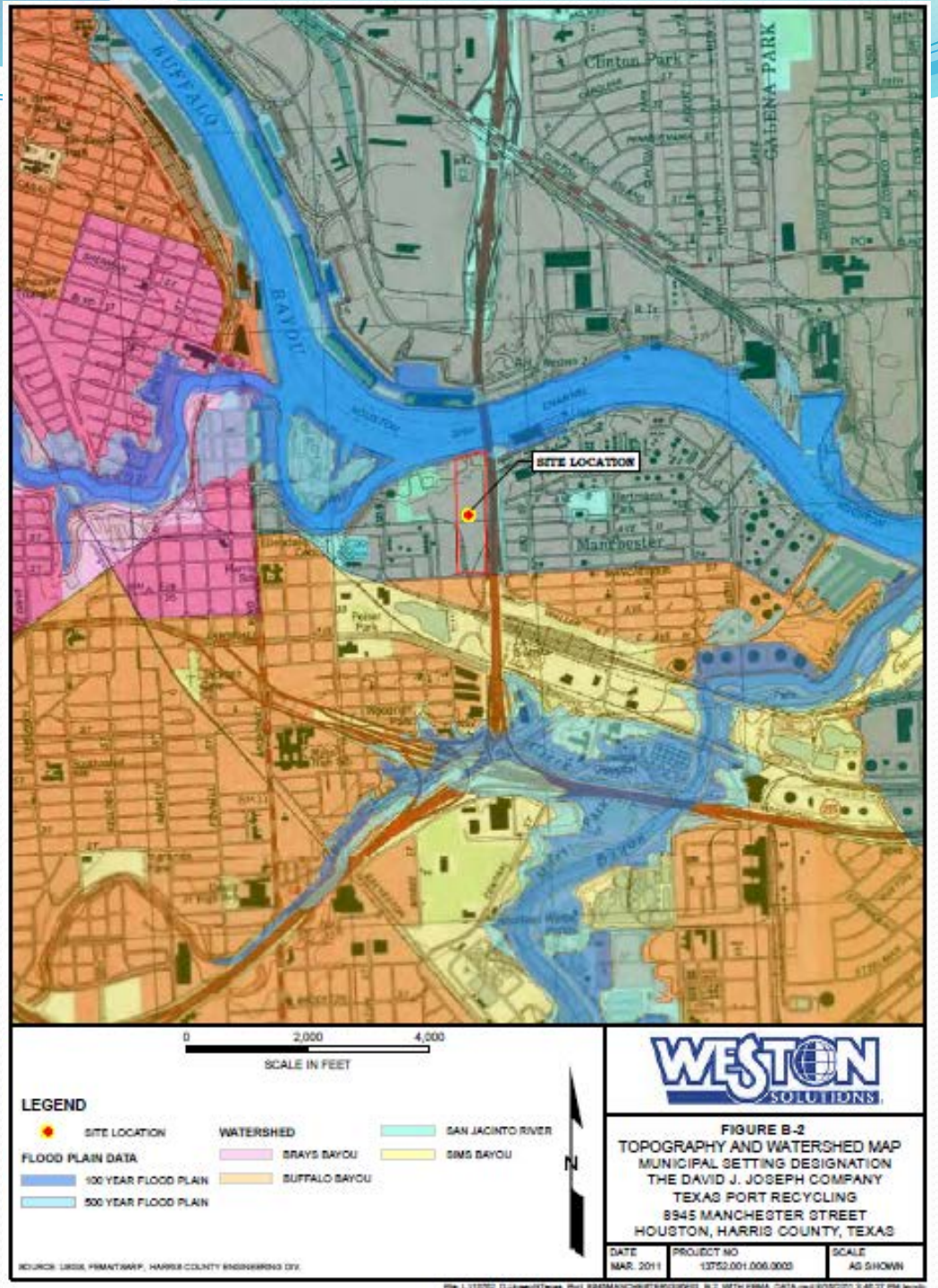
- No Public Water Supply Wells were Found Present Within a ½ Mile Radius of the site. The closest water supply well is located approximately one mile north.
- Sampling of groundwater near the Houston Ship Channel indicates no exceedances of regulatory levels.
- Recent surface water and sediment sampling in the Houston Ship Channel indicates no impact from site.
- Shallow groundwater varies from 9 to 23 feet bgs.
- MSD would be placed in the City's Utility database.

Surface Water

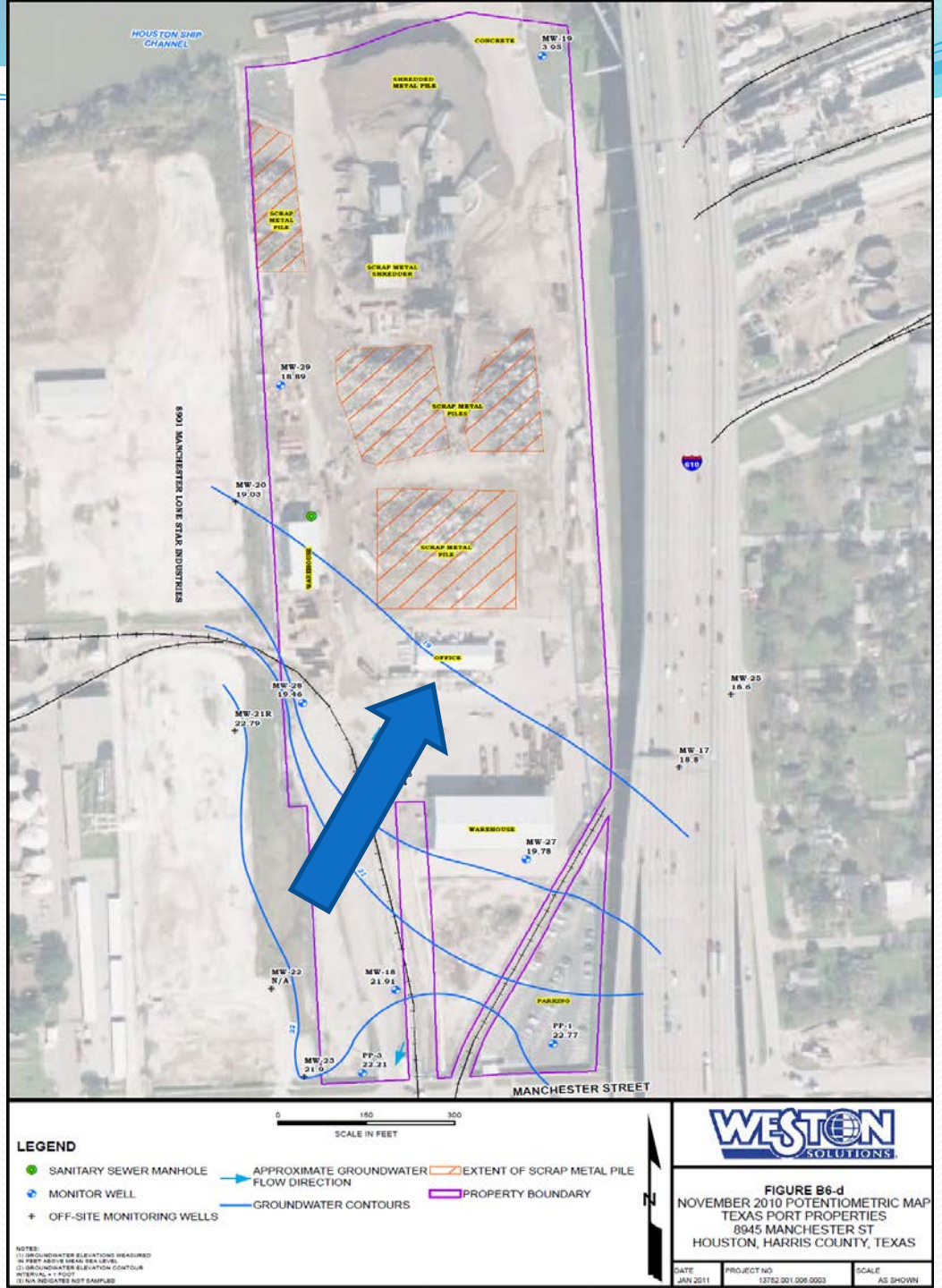
- High percentage of facility is paved or under buildings.
- No exposure of rainwater to impacted soil.
- Stormwater runoff is controlled by stormtroopers and environmental best management practices outlined in SWPPP.
- Recent sampling of surface water in the Houston Ship Channel indicates that there is no impact from the site.
- Contamination is located on the southern portion of the site.
- Historical sampling indicates that groundwater plumes are not migrating toward the Houston Ship Channel.


Texas Port Recycling Monitoring Well
Public Supply Well
29 feet
Alluvial Deposits of the Chicot Aquifer
Alluvial Deposits of the Chicot Aquifer
Clays and silts of the Beaumont/ Montgomery / Bentley Formations
1,000 feet +
Evangeline Aquifer

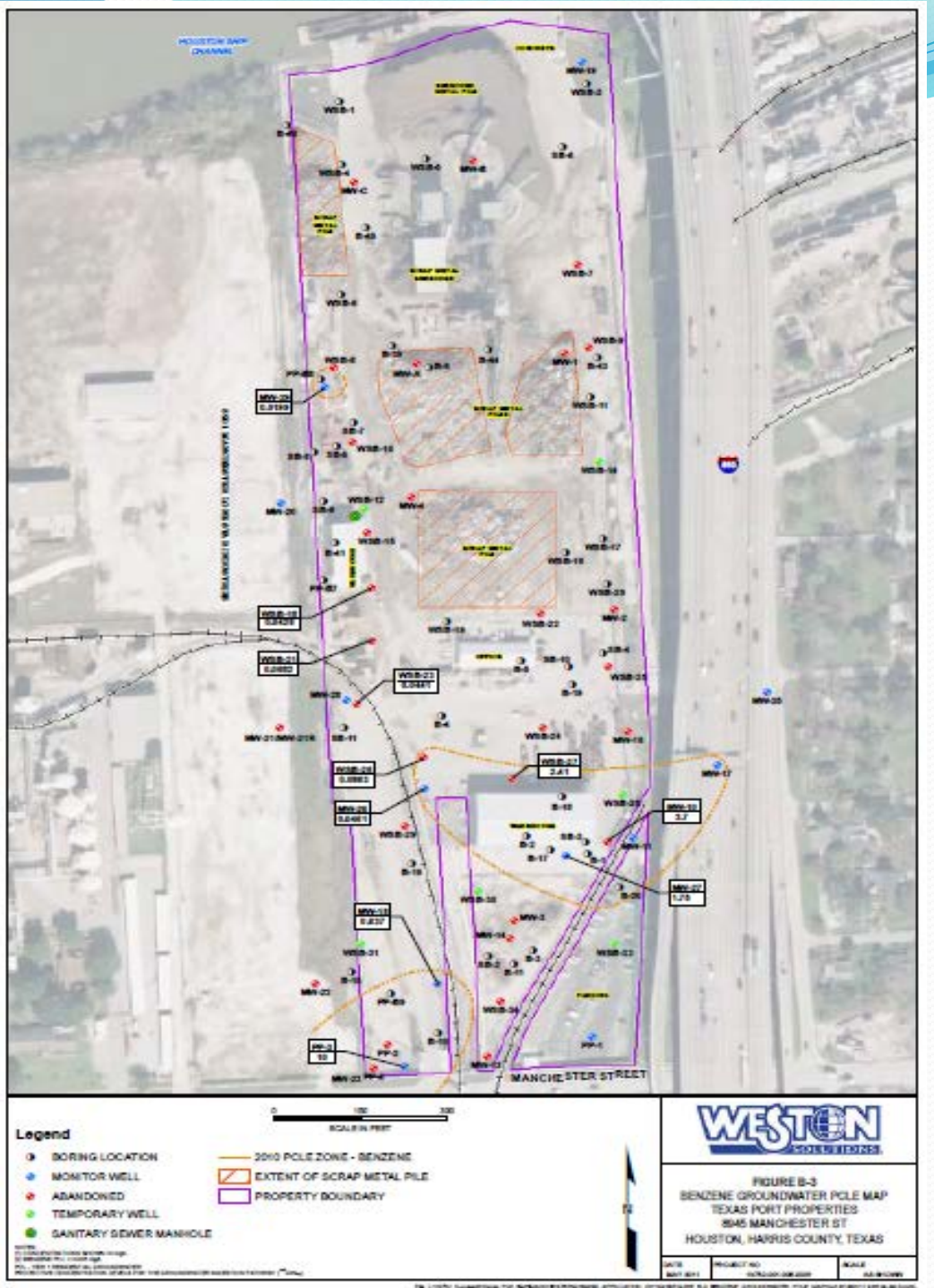
Watershed Map



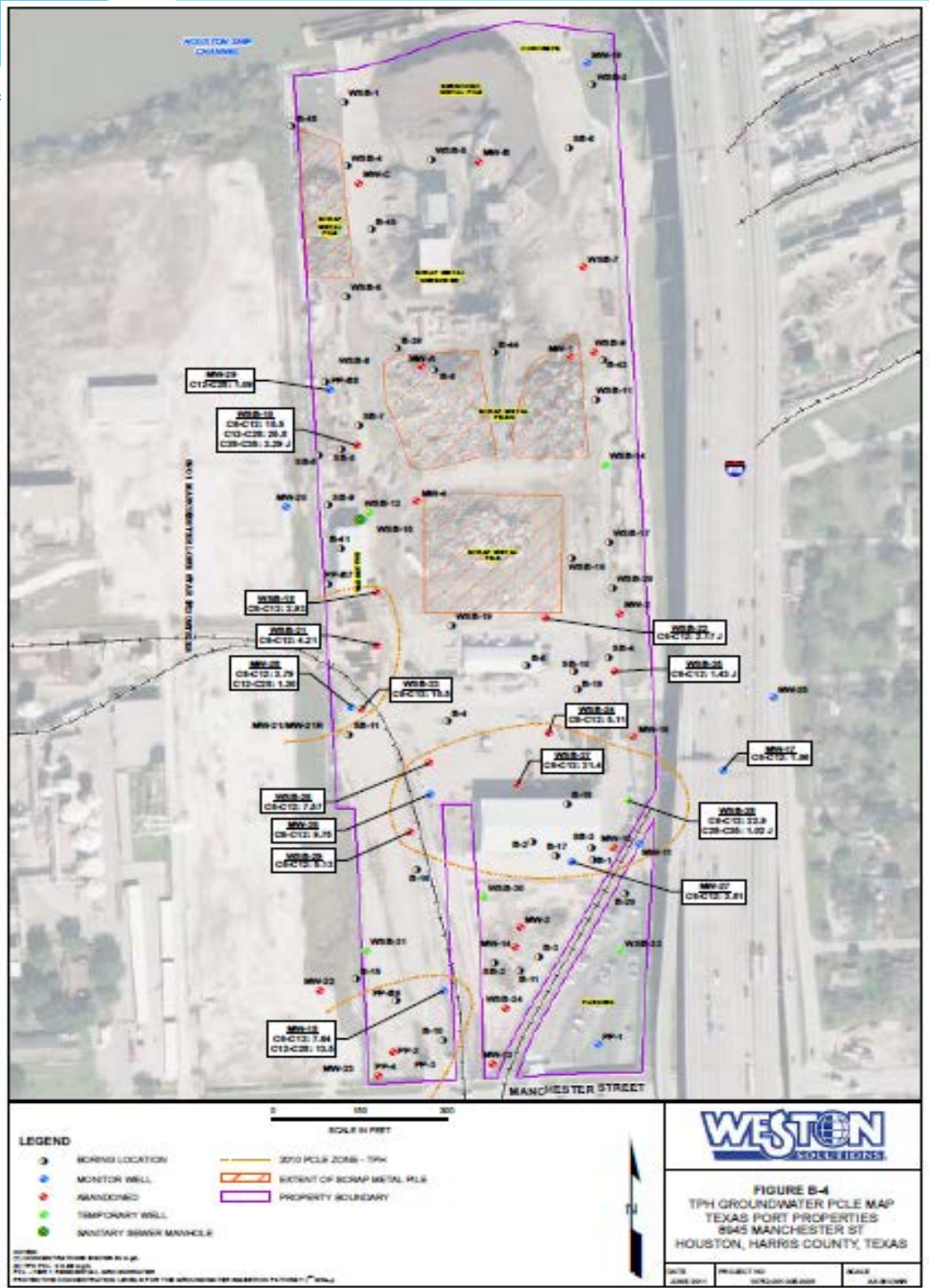
Groundwater Flow Map



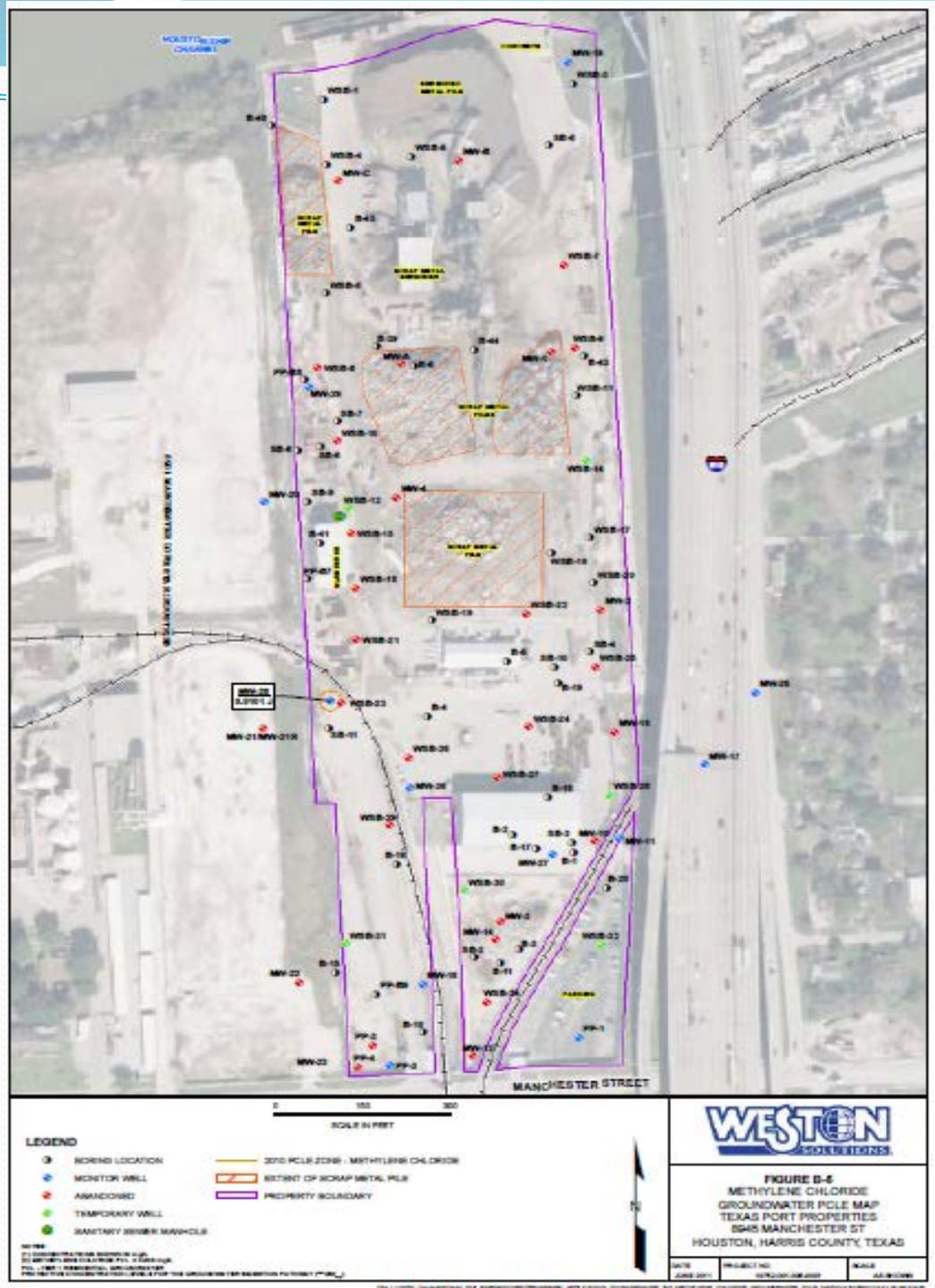
Benzene PCLE Map



TPH PCLE Map


MANCHESTER STREET
LEGEND
BORING LOCATION
MONITOR WELL
ABANDONED
TEMPORARY WELL
SANITARY SEWER MANHOLE
2010 PCLE ZONE - TPH
EXTENT OF SCRAP METAL PILE
PROPERTY BOUNDARY
WESTON SOLUTIONS
FIGURE B-4
TPH GROUNDWATER PCLE MAP
TEXAS PORT PROPERTIES
8945 MANCHESTER ST
HOUSTON, HARRIS COUNTY, TEXAS

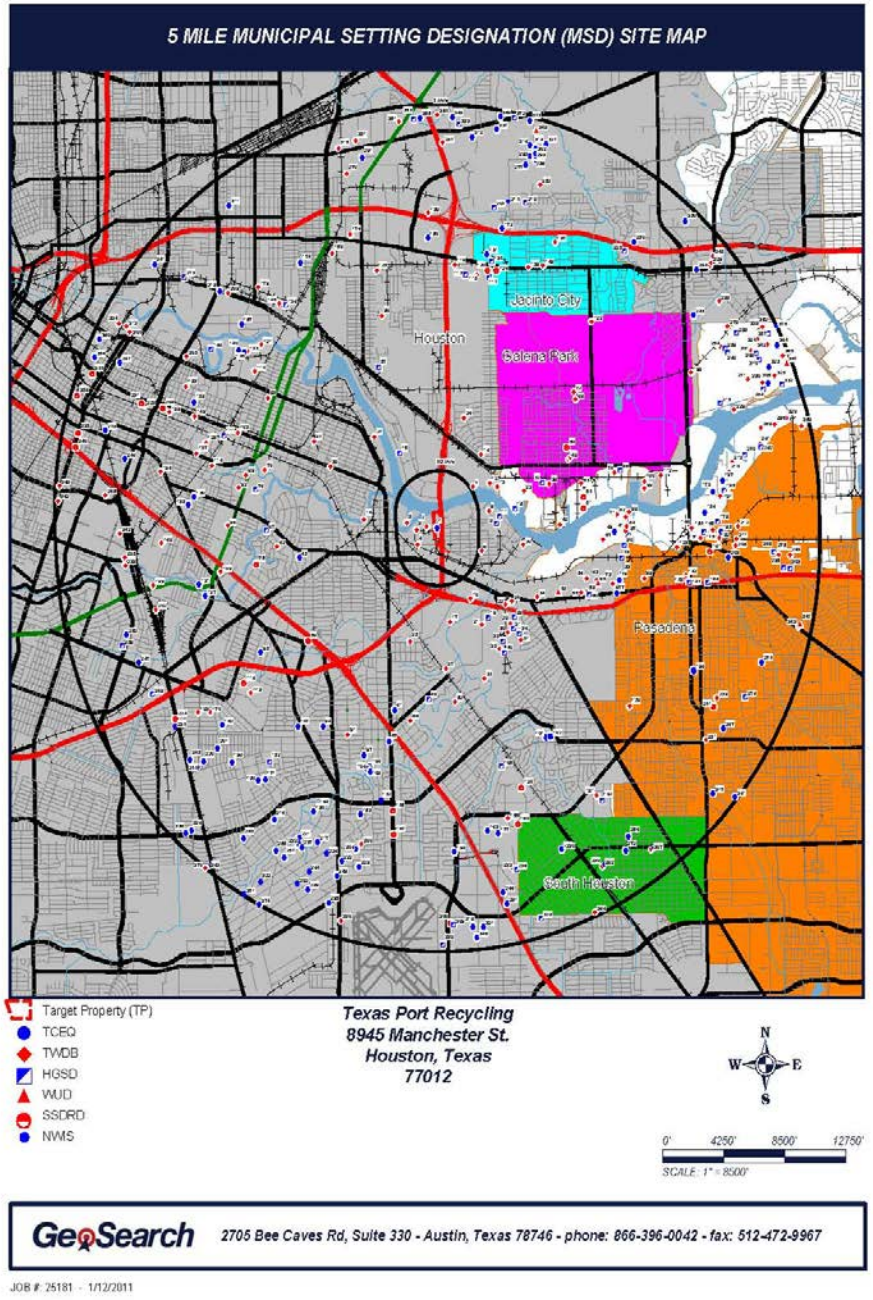
Methylene Chloride PCLE Map



Groundwater Plume

- The horizontal and vertical extent of the PCLE plumes have been delineated through site investigations, groundwater monitoring, and historical review.
- Affected groundwater is encountered 9-23 ft bgs, and is confined by a silty sandy clay layer that underlies the entire site.
- Statistical trend analysis shows that dissolved phase COC concentrations are stable or declining.
- Monitoring shows contamination is not migrating.
- Groundwater flow is toward the Ship Channel, however, monitoring has shown that no impacts to the ship channel have been observed.
- Affected zone is not drinking water quality.

5-Mile Radius Map



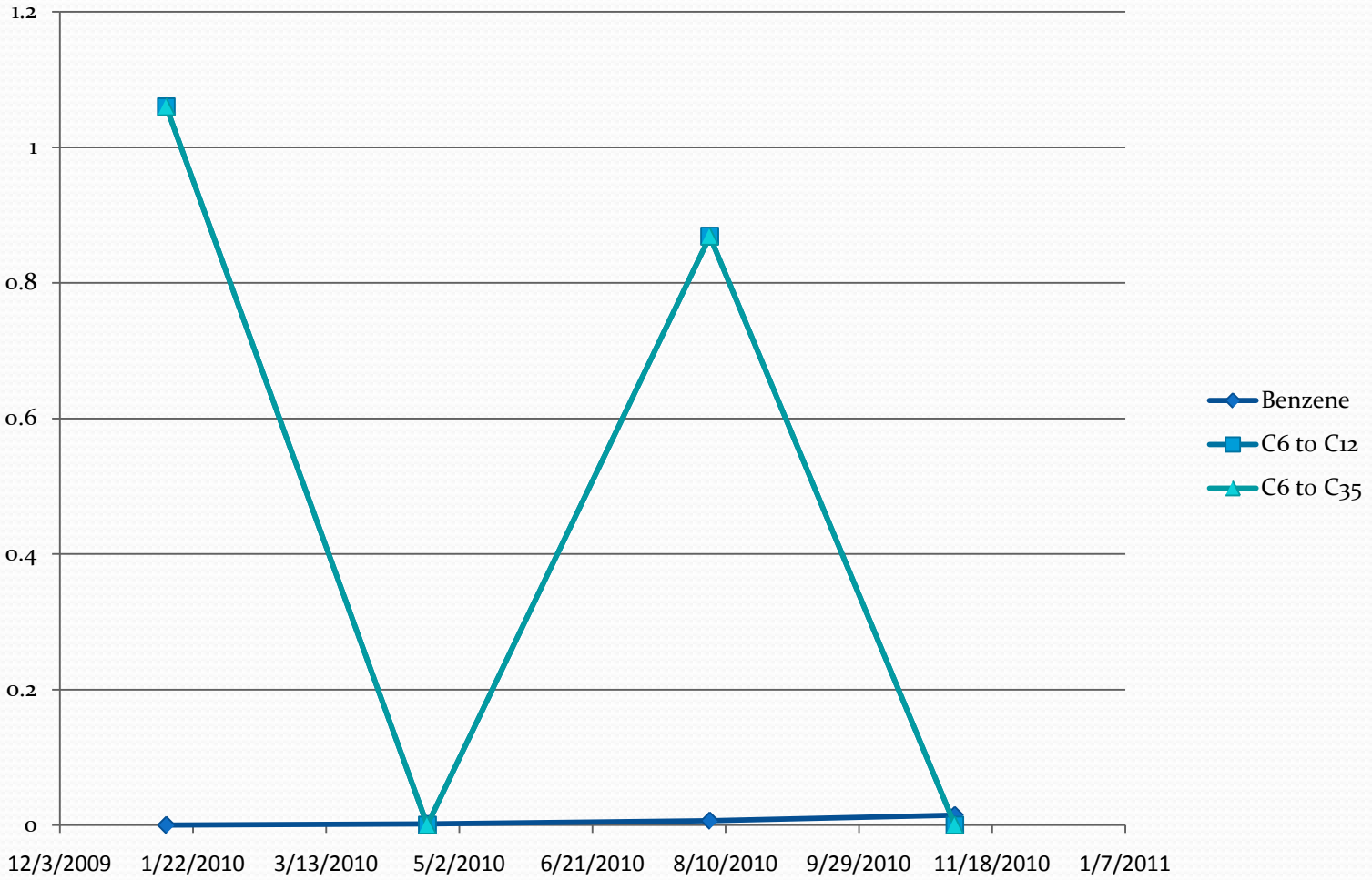
Why We are Seeking an MSD

- Shallow groundwater contains low-levels of COCs from historical on-site and off-site sources.
- The sources of the contaminants are no longer present.
- The shallow groundwater does not pose a health risk to human health and the environment and is not used as a water source in the area.
- Shallow groundwater would not be a suitable drinking water source.
- This has been and will continue to be used as industrial land.

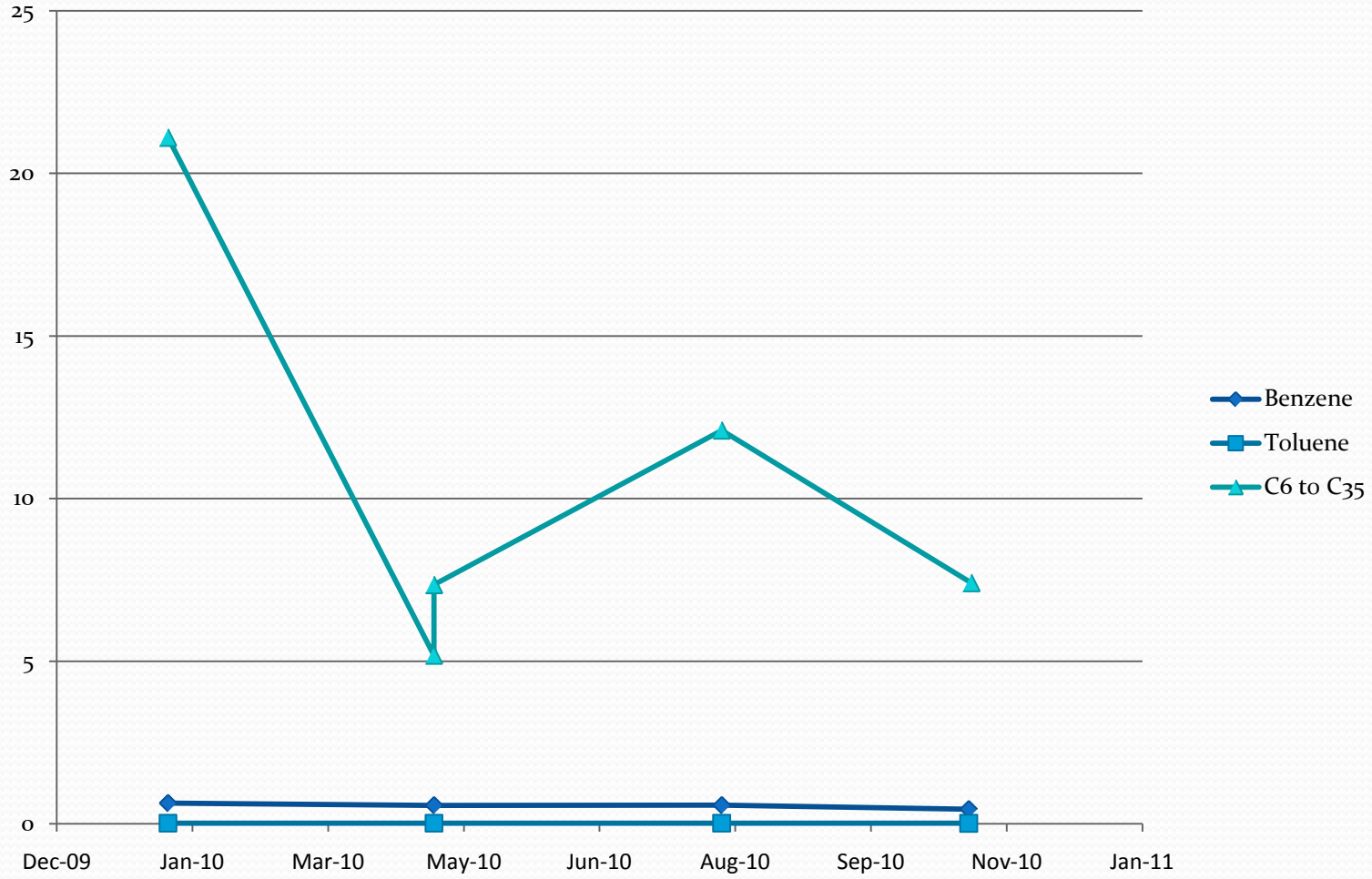
Why We are Seeking an MSD (cont.)

- The shallow COC impacts are separated from deeper drinking water aquifers by several hundred feet of impervious material.
- Data indicates that the shallow groundwater COC impacts are stable and decreasing in concentration.
- An MSD will be used to restrict the use of the property's affected groundwater and facilitate obtaining a Certificate of Completion from the Voluntary Cleanup Program.

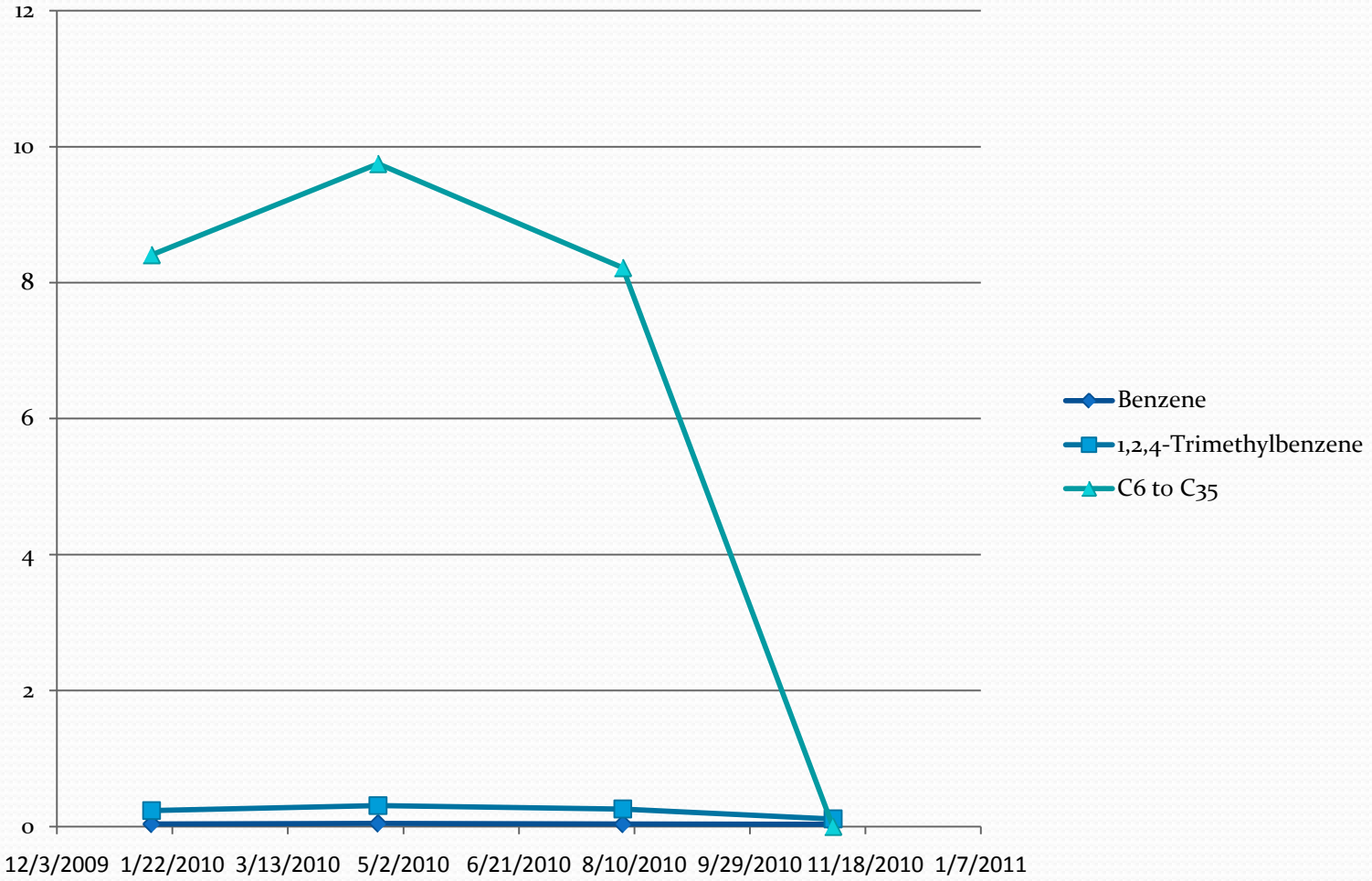
Concentration vs. Time MW-17



Concentration vs. Time MW-18



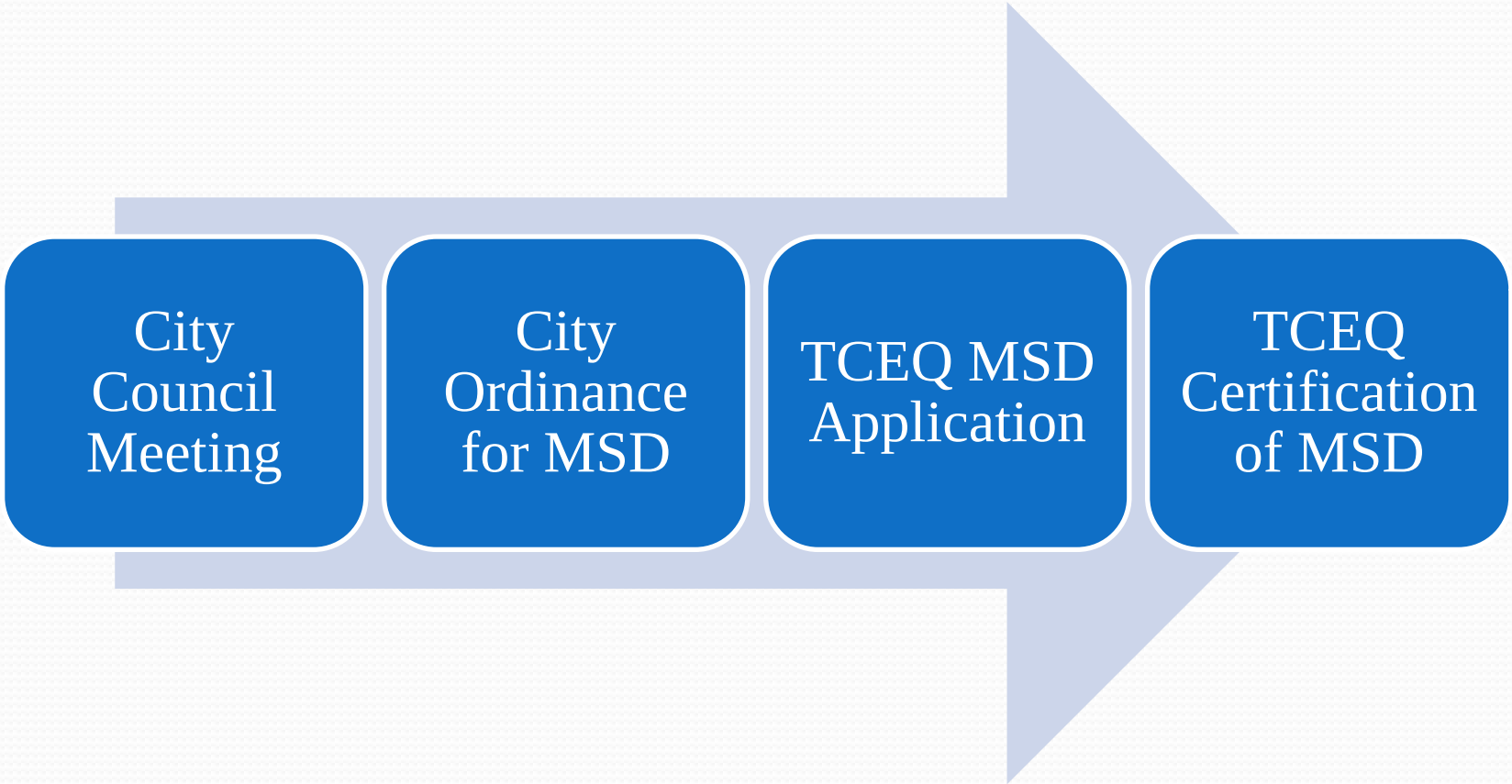
Concentration vs. Time MW-26



Summary

- Site investigated and limits of impacts determined.
- Plume is stable in areal extent and decreasing in concentration.
- No beneficial use of shallow groundwater.
- MSD is protective of public health and the environment.
- What's Next?

Timeline


City Council Meeting
City Ordinance for MSD
TCEQ MSD Application
TCEQ Certification of MSD